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TITLE : TRANSPARENT CONDUCTIVE FILM AND DISPLAY DEVICE

ABSTRACT : PROBLEM TO BE SOLVED: To realize good transparent on a display surface, electromagnetic wave shielding or antistatic effect, weather resistance such as salt-water resistance, scratch resistance, and visibility having no irregularity of natural color phases and island-like aggregation on a transmissive image, by including gold, silver, and one or more platinum group metal as micro particles in conductive layer.

SOLUTION: This film preferably contains 20-70 wt.% gold, 10-40 wt.% silver, and 10-40 wt.% platinum-group metal such as Pd or Ru having good conductivity and economical efficiency, total content of gold and silver with a low specific resistance value is not less than 60 wt.%, and content of silver with relatively low chemical stability is not more than 40 wt.%. The platinum-group metal with low resistance and controllable refractive index is stable in dispersion of micro particle, and suppresses island-like aggregation in the film. Preferably, at least part of micro particles with 1-10 nm grain size form chain-like aggregates with 5-200 nm length, contact resistance between metal particles of a network structure where the aggregates are entangled is low, and light easily passes through the network. Coating having dispersed these particles is applied to a base material to form a conductive layer.

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